

IN THE CLAIMS

Please rewrite claims 1, 2, 10, 19, 40, 53, 58 and 79 as follows. Please cancel claims 80-81 without prejudice and add new claim 82.

1. A method of creating a computer generated image having at least one polygon surface represented by a plurality of pixels comprising:
providing at least a pair of specular light intensity functions, wherein each specular light intensity function is representative of the specular light reflected by a respective pixel at a different surface reflectance characteristic;

determining a specularity modulation value for a respective pixel by retrieving the specularity modulation value from a memory;

interpolating the specular light intensity functions using the specularity modulation value to obtain a composite specularity value; and using said composite specularity value to modulate pixel color of the polygon surface of the computer generated image.

2. The method of claim 1 wherein the step of providing at least a pair of specular light intensity functions comprises providing a maximum specular light intensity function and a minimum specular light intensity function.

10. The method of claim 1 wherein the step of determining the specularity modulation value comprises retrieving the specularity modulation value from a two-dimensional map contained in a texture memory.

19. A method of creating a computer generated image having at least one polygon surface represented by a plurality of pixels, the method comprising:

generating a polygon surface represented by a plurality of vectors for each pixel in said plurality of pixels, the vectors including a light source vector, a surface normal vector and a view vector;

providing at least a pair of specular light intensity functions, wherein each specular light intensity function is representative of the specular light reflected by a respective pixel at different surface reflectance characteristic;

determining a specularity modulation value for a respective pixel by retrieving the specularity modulation value from a memory;

interpolating the specular light intensity functions using the specularity modulation value to obtain a composite specularity value; and

using said composite specularity value to modulate pixel color of the polygon surface of the computer generated image.

40. A method of creating a computer generated image having at least one polygon surface represented by a plurality of pixels comprising:

providing at least a pair of color intensity functions, wherein each color intensity function is representative of the color reflected by a respective pixel at a different surface reflectance characteristic;

determining a color modulation value for a respective pixel by retrieving the color modulation value from a memory;

interpolating the color intensity functions using the color modulation value to obtain a composite color value; and

using said composite color value to modulate pixel color of the polygon surface of the computer generated image.

53. The method of claim 40 wherein the step of providing at least a pair of color intensity functions comprises specifying a specular exponent value for at least one of the functions.

58. A method of creating a computer generated image having at least one polygon surface represented by a plurality of pixels, the method comprising:

generating a polygon surface represented by a plurality of vectors for each pixel in said plurality of pixels, the vectors including a light source vector, a surface normal vector and a view vector;

providing at least a pair of color intensity functions, wherein each color intensity function is representative of the specular light reflected by a respective pixel at different surface reflectance characteristic;

determining a color modulation value for a respective pixel;

interpolating the color intensity functions using the color modulation value to obtain a composite color value; and

using said composite color value to modulate pixel color of the polygon surface of the computer generated image.

79. A method of creating a computer generated image having at least one polygon surface represented by a plurality of pixels, the method comprising:

generating a polygon surface represented by a plurality of vectors for each pixel in said plurality of pixels, the vectors including a light source vector, a surface normal vector and a view vector;

in real time, using one or more values from a map to determine a reflectivity of the polygon surface for a respective pixel in the polygon of the computer generated image;

using the determined reflectivity to calculate the specular reflection at the respective pixel in the polygon including calculating the specular reflection using two or more specularity functions.